156. The audience measurement system of claim 154 wherein the audio signal is detected by an intrusive connection into the digital receiver.

157. The audience measurement system of claim 153 wherein the comparitor comprises a software agent stored in association with the digital receiver.

158. The audience measurement system of claim 153 further comprising a person identifier.--

REMARKS

I.   Preliminary Remarks

Claims 70-158 have been added. Accordingly, claims 1-158 are pending in the application. Claims 71, 73, and 75 are substantially identical to claims 1, 17, and 18, respectively, of Massetti, U.S. Patent No. 5,974,299 (the "Massetti patent"). Claims 70-158 find support in the specification and drawings, and support for claims 70-77 is set forth in detail in Section II(E) herein. Claims 70-77 have been added to provoke an interference with the Massetti patent.

II.   Request For Declaration of an Interference
   With Massetti, U.S. Patent No. 5,974,299

A.   Identification of the Patent Pursuant to 37 C.F.R. § 1.607(a)(1)

The Massetti patent, which issued October 26, 1999, based on U.S. application Serial No. 09/085,501 filed May 27, 1998, claims subject matter that interferes with subject matter claimed in the application (the "Lu et al. application"). A copy of the

Massetti patent is attached hereto as Appendix B.

B.   Presentation of a Proposed Count Pursuant to 37 C.F.R. § 1.607(a)(2)

Applicants propose Count A as set forth in attached Appendix A. Proposed Count A is a phantom count, as it is broader in scope than all claims believed to correspond to Count A. Count A incorporates the subject matter of independent claims 70, 72, 74, and 76. Specifically, the first alternative statement of proposed Count A is identical to claim 76; the second alternative statement of proposed Count A incorporates the subject matter of claim 70 and claim 72; and the third alternative statement of Count A is identical to claim 74. Incorporation of the subject matter of these four independent claims into a single count is appropriate because the four claims recite a single patentable invention. Claims 70 and 72 have identical limitations. The sole difference between these two claims is that the preamble of claim 70 recites "[a]n audience rating system for digital television and radio," whereas the preamble of claim 72 recites "[a] system for recording reception of pay programs on digital television and radio." Claim 74 claims an apparatus corresponding to the method of claim 70. Specifically, claim 74 contains the identical limitations as claim 70, along with the phrase "means for" inserted at the beginning of each limitation.

Claim 76 is based on claim 70, and, as explained in detail below, these claims recite a single patentable invention. A comparison between claim 76 and claim 70 is set forth in the table below:

CLAIM 70	CLAIM 76
An audience rating system for digital television and radio, comprising the steps of:	An audience measurement method for digital programming, comprising the steps of:
extracting at least one identification code for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins;	extracting at least one identification code from at least one digital multiplexed stream of a first program when reception of the first program by a receiver begins;
recording at least one identification code extracted and thus time reception of the first channel begins;	recording the at least one identification code and the time that reception of the first program begins;
extracting at least one identification code for at least one digital stream of any subsequent channel, from the control stream of the multiplexed digital transmission, when reception of the subsequent channel by the receiver begins; and	extracting at least one identification code from at least one digital multiplexed stream of any subsequent program when reception of the subsequent program by the receiver begins; and
recording at least one identification code extracted and the time reception of the subsequent channel begins.	recording the at least one identification code and the time that reception of the subsequent program begins.

As shown in the table above, claim 76 differs from claim 70 in the following manner: (1) the preamble of claim 76 recites "[a]n audience measurement method for digital programming," whereas claim 70 recites "[a]n audience rating system for digital television and radio"; (2) claim 76 substitutes "program" for the term "channel" in claim 70; (3) claim 76 substitutes "from at least one digital multiplexed stream" for the phrases "for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission" and "for at least one digital

stream of any subsequent channel, from the control stream of the multiplexed digital transmission" in claim 70; and (4) claim 76 does not include the term "extracted" in the final limitation of the claim.

Claim 77, which, as noted in Section II(C) below, corresponds substantially to proposed count A, is based on claims 70 and 76, and a side-by-side comparison between claim 77 and claim 76 is set forth in the table below:

CLAIM 76	CLAIM 77
An audience measurement method for digital programming, comprising the steps of:	A method of determining audience ratings in connection with digital programming comprising the following steps:
extracting at least one identification code from at least one digital multiplexed stream of a first program when reception of the first program by a receiver begins;	a) reading a first identification datum from a multiplexed digital stream corresponding to a first program tuned by a digital program tuner;
recording the at least one identification code and the time that reception of the first program begins;	b) time stamping the first identification datum;
extracting at least one identification code from at least one digital multiplexed stream of any subsequent program when reception of the subsequent program by the receiver begins; and	c) subsequently reading a second identification datum from a multiplexed digital stream corresponding to a second program tuned by the digital program tuner; and,
recording the at least one identification code and the time that reception of the subsequent program begins.	d) time stamping the second identification datum.

As shown in the table above, claim 77 differs from claim 76 in the following manner: (1) the preamble of claim 77 recites "[a] method of determining audience ratings in connection with digital programming," whereas claim 76 recites "[a]n

audience measurement method for digital programming"; (2) claim 77 substitutes the term "identification datum" for the term "identification code" in claim 76; and (3) claim 77 uses the term "time stamping" to refer to "recording" an identification datum and recording "the time" that reception begins, as recited in claim 76.

Claims 76 and 77 are identical in scope as claim 70, but differ from claim 70 (which is based on Massetti claim 1) in that claims 76 and 77 use terminology that is more consistent with the terminology used in the Lu et al. specification, which the applicants believe is consistent with the terminology generally used by those of ordinary skill in the art. Moreover, the preambles of claims 76 and 77 clearly indicate that each of these claims recites a "method."

C. Identification of Claims of the Massetti Patent That Correspond to Proposed Count A Pursuant to 37 C.F.R. § 1.607(a)(3)

The Massetti patent contains 20 claims. Independent claims 1, 17, and 18 correspond substantially to proposed Count A. Independent claims 1 and 17 of the Massetti patent correspond to Count A because these claims each contain one of the alternative statements of the preamble of the second alternative statement of Count A and these claims contain all of the limitations of the second alternative statement of proposed Count A. (Claims 1 and 17 differ from the second alternative statement of Count A in that claims 1 and 17 also include the limitation "recording the time that reception by the receiver is ended.") Independent claim 18 of the Massetti patent corresponds to Count A because this claim contains the preamble and all of the limitations of the third alternative statement of Count A. (Claim 18 differs from the third alternative statement of Count A in that claim 18 also includes the limitation

"means for recording the time that reception by the receiver is ended.")

Claims 2-16 of the Massetti patent, which depend directly or indirectly from claim 1, and claims 19 and 20, which depend directly or indirectly from claim 18, correspond substantially to the Count as they are not novel over or unobvious in view of the independent claims from which they depend.

D.   Identification of Claims of the Lu Application That Correspond to Proposed Count A Pursuant to 37 C.F.R. § 1.607(a)(4)

Application claims 70, 72, 74, and 76 correspond exactly to proposed Count A. More particularly, application claim 76 corresponds exactly to the first alternative statement of proposed Count A, application claims 70 and 72 correspond exactly to the second alternative statement of proposed Count A and application claim 74 corresponds exactly to the third alternative statement of proposed Count A.

Application claims 71, 73, 75, and 77 correspond substantially to proposed Count A. Application claims 71, 73, and 75 are substantially identical to Massetti claims 1, 17, and 18, respectively. Accordingly, application claims 71 and 73 differ from claims 70 and 72, respectively, (and from the second alternative statement of Count A) in that claims 71 and 73 also include the limitation "recording the time that reception by the receiver is ended." Application claim 75 differs from claim 74 (and from the third alternative statement of Count A) in that claim 75 also includes the limitation "means for recording the time that reception by the receiver is ended." As explained in detail in Section II(B) above, claim 77 is identical in scope as claim 70 (second alternative statement of Count A) and claim 76 (first alternative statement of Count A), but uses some terminology different from that used in those claims.

E. Application of the Terms of Claims 70-77 to the Disclosure of the Application Pursuant to 37 C.F.R. § 1.607(a)(5)

1. Claim 70

CLAIM 70	Application Serial No. 09/076,517
An audience rating system for digital television and radio, comprising the steps of:	Figs. 1-7; pages 1-54.
extracting at least one identification code for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins;	Fig. 7; page 46, line 17 to page 47, line 9.
recording at least one identification code extracted and thus time reception of the first channel begins;	Fig. 7; page 47, line 19 to page 48, line 11.
extracting at least one identification code for at least one digital stream of any subsequent channel, from the control stream of the multiplexed digital transmission, when reception of the subsequent channel by the receiver begins; and	Fig. 7; page 46, line 17 to page 48, line 10.
recording at least one identification code extracted and the time reception of the subsequent channel begins.	Fig. 7; page 48, lines 4-11

Claim 70 is supported by the specification, as indicated by the table above.

The "audience rating system for digital television and radio" is described throughout the disclosure, for example, at page 1, lines 1-15, at page 4, lines 3-5, and at page 9, line 19 to page 14, line 17.

The step of "extracting at least one identification code for at least one digital

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stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins" is shown, for example, at Fig. 7, which illustrates a flow chart of steps performed by a software agent 500. The specification explains that the software agent can be used to detect " a message relating to selection of a television program being broadcast in a selected channel." (page 27, lines 9-11). At box 506 of Fig. 7 ("Is Packet Labeled?"), the step of determining whether a data packet has a decodable packet label including a program identification code is shown (*see* page 46, line 23 to page 47, line 2). The specification uses the term "packet label" to refer to an *identification code* from a control stream of a multiplexed digital transmission. See, for example, page 5, lines 1-4 (stating that in digital broadcasting a "broadcaster can transmit as many as six programs (arrayed as a series of data packets, where each *data packet* is *labeled* as to which of the programs' data is carried therein) within an assigned 6 MHZ frequency band") (emphasis added). Also, the bit stream of a channel is a multiplexed digital transmission (e.g., see page 10, line 22 to page 11, line 16; page 12, line 8 to page 13, line 6; and page 32, lines 10-16).

The step of "recording at least one identification code extracted and thus time reception of the first channel begins" is shown at box 512 of Fig. 7 ("Log TV Program Name & Time"). The phrase "Log TV Program Name & Time" in block 512 indicates logging (recording) the at least one identification code extracted identification and the time that reception begins.

The subsequent steps of extracting an identification code from any subsequent channel, and recording the identification code extracted and the time reception of the subsequent channel begins, are shown, for example, at boxes 506, 510 ("Is Label

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Same As Previous One?), and 512 of Fig. 7, and result from subsequent passes

through the agent 500. Box 510 shows a step of determining if the identification code

is the same as the previously-identified code. If the identification code is different

(i.e., if a subsequent program or channel is being viewed), then Fig. 7 indicates

proceeding with the logging and time-stamping step shown in box 512.

2.   Claim 71

CLAIM 71	Application Serial No. 09/076,517
recording the time that reception by the receiver is ended	Fig. 7; page 47, line 19 to page 48, line 3.

Claim 71, which depends from claim 70, is supported by the specification, as

indicated by the table above and for the reasons discussed in section II(E)(1) above,

with respect to claim 70. The step of recording the time that reception is ended is

shown in boxes 510 and 512 of Fig. 7. The specification explains that after an

identification code is identified at block 510, "there is no need to store the packet

label [identification code] unless it is merely indicative of *continued viewing* to an

already identified television program." (page 47, line 19 to page 48, line 3) (emphasis

added). This portion of the specification discloses that the identification code may be

stored if one desires to indicate *continued viewing* of a television program. A step of

recording codes and times for continued viewing inherently includes a step of

recording the time that reception is ended (i.e., the time logged during the last pass

through the agent 500 indicates the time that reception by the receiver is ended).

3. Claims 72, 73

CLAIMS 72, 73	Application Serial No. 09/076,517
A system for recording reception of pay programs on digital television and radio, comprising the steps of:	Figs. 1-7; pages 1-54.

Claims 72 and 73 are identical to claims 70 and 71, respectively, except for the preamble section of the claims. Accordingly, support for each of the limitations of claims 72 and 73 is identical to the support for the limitations of claims 70 and 71, respectively, as shown in sections II(E)(1) & (2) above. The method recited in claims 70 and 71 may be used to record reception of pay programs on digital television and radio (claims 70, 71 preamble) as well as for an audience rating system for television and radio (claims 72, 73 preamble). See, for example, page 18, lines 17-20 (referring to "pay-per-view television programming, video-on-demand television programming, satellite programs, and/or other services provided").

4. Claim 74

CLAIM 74	Application Serial No. 09/076,517
An apparatus for audience rating of digital television and radio, comprising:	Figs. 1-7; pages 1-54.
means for extracting at least one identification code for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins;	Figs. 3, 7; page 25, line 10 to page 31, line 18; page 46, line 17 to page 47, line 9.
means for recording at least one identification code extracted and thus time reception of the first channel begins;	Figs. 3, 7; page 25, line 10 to page 31, line 18; page 47, line 19 to page 48, line 11.
means for extracting at least one identification code for at least one digital stream of any subsequent channel, from the control stream of the multiplexed digital transmission, when reception of the subsequent channel by the receiver begins; and	Figs. 3, 7; page 25, line 10 to page 31, line 18; page 46, line 17 to page 48, line 10.
means for recording at least one identification code extracted and the time reception of the subsequent channel begins.	Figs. 3, 7; page 25, line 10 to page 31, line 18; page 48, lines 4-11

Claim 74 is supported by the specification, as indicated by the table above.

Claim 74 is directed to an *apparatus* for audience rating of digital television and radio, which corresponds to the audience rating system *method* recited in claim 70.

The relationship between claim 74 and claim 70 is apparent in the claim language: each limitation of claim 74 includes identical language as a corresponding limitation of claim 70, along with the phrase "means for." Accordingly, the portions of the disclosure identified in Section II(E)(1) above as supporting claim 70, also support

corresponding apparatus claim 74. The table above also indicates portions of the specification that disclose *structure* for performing each recited function.[1] The disclosed structure includes a digital converter 106 (which includes a software agent 112) (page 27, lines 4-13) and/or a digital television set 110 (which includes a software agent 118) (page 28, lines 1-14). The specification indicates that the software agents 112, 118 can be the software agent 500 shown in Fig. 7 and described in Section II(E)(1) above with respect to support for corresponding method claim 70 (see page 46, lines 17-19 ("[t]he software agent 500 can be used for any of the software agents 112, 118, and 122)). Accordingly, the digital converter 106 and/or the digital television 110 are disclosed structures for performing each of the corresponding functions recited in claim 70. The digital converter 106 and/or the digital television set 110 are equivalent to the "meter 20" of the Massetti patent, which is described in the Massetti patent as performing the recited functions (*see, e.g.,* Massetti patent, col. 5, line 13 to col. 6, line 48).

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[1] Claims 74 and 75 (and claim 18 of the Massetti patent, from which claim 75 was copied) are clearly means-plus-function claims under 35 U.S.C. § 112, ¶ 6, because each limitation of these claims includes the word "means" without reciting sufficient structure for performing the recited function. *See Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999). Accordingly, each "means for" limitation is construed to cover the structure described in the specification and equivalents thereof. 35 U.S.C. § 112, ¶ 6; *Great Plains Chem.*, 194 F.3d at 1257-58.

5. **Claim 75**

CLAIM 75	Application Serial No. 09/076,517
means for recording the time that reception by the receiver is ended	Figs. 3, 7; page 25, line 10 to page 31, line 18; page 47, line 19 to page 48, line 3.

Claim 75, which depends from claim 74, is supported by the specification, as indicated by the table above, and for the reasons discussed in section II(E)(4) above, with respect to claim 74.

6. **Claim 76**

CLAIM 76	Application Serial No. 09/076,517
An audience measurement method for digital programming, comprising the steps of:	Figs. 1-7; pages 1-54.
extracting at least one identification code from at least one digital multiplexed stream of a first program when reception of the first program by a receiver begins;	Fig. 7; page 46, line 17 to page 47, line 9.
recording the at least one identification code and the time that reception of the first program begins;	Fig. 7; page 47, line 19 to page 48, line 11.
extracting at least one identification code from at least one digital multiplexed stream of any subsequent program when reception of the subsequent program by the receiver begins; and	Fig. 7; page 46, line 17 to page 48, line 10.
recording the at least one identification code and the time that reception of the subsequent program begins.	Fig. 7; page 48, lines 4-11

Claim 76 is supported by the specification, as indicated by the table above. The "audience measurement method for digital programming" is described throughout the disclosure, for example, at page 1, lines 1-15 and at page 4, lines 3-5.

The step of "extracting at least one identification code from at least one digital multiplexed stream of a first program when reception of the first program by a receiver begins" is shown, for example, at Fig. 7, which illustrates a flow chart of steps performed by a software agent 500. The specification explains that the software agent can be used to detect " a message relating to selection of a television program being broadcast in a selected channel." (page 27, lines 9-11). At box 506 of Fig. 7 ("Is Packet Labeled?"), the step of determining whether a data packet has a decodable packet label including a program identification code is shown (*see* page 46, line 23 to page 47, line 2). The specification uses the term "packet label" to refer to an *identification code* from a digital multiplexed stream. See, for example, page 5, lines 1-4 (stating that in digital broadcasting a "broadcaster can transmit as many as six programs (arrayed as a series of data packets, where each *data packet* is *labeled* as to which of the programs' data is carried therein) within an assigned 6 MHZ frequency band") (emphasis added). Also, the bit stream of a channel is a multiplexed digital transmission (e.g., see page 10, line 22 to page 11, line 16; page 12, line 8 to page 13, line 6; and page 32, lines 10-16).

The step of "recording at least one identification code and the time reception of the first program begins" is shown at box 512 of Fig. 7 ("Log TV Program Name & Time"). The phrase "Log TV Program Name & Time" in block 512 indicates logging (recording) the at least one identification code and the time that reception begins.

The subsequent steps of extracting an identification code of any subsequent

program, and recording the identification code and the time reception of the subsequent program begins, are shown, for example, at boxes 506, 510 ("Is Label Same As Previous One?), and 512 of Fig. 7, and result from subsequent passes through the agent 500. Box 510 shows a step of determining if the identification code is the same as the previously-identified code. If the identification code is different (i.e., if a subsequent program or channel is being viewed), then Fig. 7 indicates proceeding with the logging and time-stamping step shown in box 512.

7.   Claim 77

CLAIM 77	Application Serial No. 09/076,517
A method of determining audience ratings in connection with digital programming comprising the following steps:	Figs. 1-7; pages 1-54.
a) reading a first identification datum from a multiplexed digital stream corresponding to a first program tuned by a digital program tuner;	Fig. 7; page 46, line 17 to page 47, line 9.
b) time stamping the first identification datum;	Fig. 7; page 47, line 19 to page 48, line 11.
c) subsequently reading a second identification datum from a multiplexed digital stream corresponding to a second program tuned by the digital program tuner; and,	Fig. 7; page 46, line 17 to page 48, line 10.
d) time stamping the second identification datum.	Fig. 7; page 48, lines 4-11

Claim 77 is supported by the specification, as indicated by the table above. The "method of determining audience ratings in connection with digital

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programming" is described throughout the disclosure, for example, at page 1, lines 1-15.

The step of "reading a first identification datum from a multiplexed digital stream corresponding to a first program tuned by a digital program tuner" is shown, for example, at Fig. 7, which illustrates a flow chart of steps performed by a software agent 500. The specification explains that the software agent can be used to detect " a message relating to selection of a television program being broadcast in a selected channel." (page 27, lines 9-11). At box 506 of Fig. 7 ("Is Packet Labeled?"), the step of determining whether a data packet has a decodable packet label including a program identification code (i.e., an identification datum) is shown (*see* page 46, line 23 to page 47, line 2). The specification uses the term "packet label" to refer to an *identification code* (or datum) from a digital multiplexed stream. See, for example, page 5, lines 1-4 (stating that in digital broadcasting a "broadcaster can transmit as many as six programs (arrayed as a series of *data* packets, where each *data packet* is *labeled* as to which of the programs' *data* is carried therein) within an assigned 6 MHZ frequency band") (emphasis added). Also, the bit stream of a channel is a multiplexed digital transmission (e.g., see page 10, line 22 to page 11, line 16; page 12, line 8 to page 13, line 6; and page 32, lines 10-16).

The step of "time stamping the first identification datum" is shown at box 512 of Fig. 7 ("Log TV Program Name & Time"). The phrase "Log TV Program Name & Time" in block 512 indicates time stamping the first identification datum.

The steps of subsequently reading a second identification datum from a multiplexed digital stream corresponding to a second program tuned by the digital program tuner and time stamping the second identification datum, are shown, for

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example, at boxes 506, 510 ("Is Label Same As Previous One?), and 512 of Fig. 7,

and result from subsequent passes through the agent 500. Box 510 shows a step of

determining if the identification datum is the same as the previous identification

datum. If the identification datum is different (i.e., if a subsequent program or

channel is being viewed), then Fig. 7 indicates proceeding with the logging and time-

stamping step shown in box 512.

F.   Statement Pursuant to 37 C.F.R. § 1.607(a)(6)
        Concerning 35 U.S.C. § 135(b)

Claims 70-77, which correspond to proposed Count A, are being presented

herein within one year after the October 26, 1999 issue date of the Massetti patent.

Accordingly, the requirements set forth in 35 U.S.C. § 135(b) are satisfied.

G.   Statement Concerning Masseti Continuation-In-Part
        Application, Serial No. 09/289,758

The applicants are aware of a continuation-in-part application, U.S.

application Serial No. 09/289,758 ("Massetti CIP Application"), filed by Massetti on

April 12, 1999. Massetti's PCT application, International Patent Application No. WO

99/62260, filed on May 21, 1999, claims priority to both the Massetti CIP Application

and to the application corresponding to the Massetti patent. Based on the contents of

the Massetti PCT application, the applicants believe that there may be interfering

subject matter contained in the Massetti CIP application and the present application.

Accordingly, the applicants respectfully request that the examiner evaluate the

Massetti CIP Application to determine if declaration of an interference is appropriate

under 37 C.F.R. § 1.603.

CONCLUSION

Applicants respectfully request entry of claims 70-158 and the declaration of an interference between the Lu et al. application and Massetti, U.S. Patent No. 5,974,299.

Respectfully submitted,

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